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Environmental Services, Inc.

August 14, 1997

Mr. James E. Ross, P.E.
Unit Chief, Site Cleanup Unit
California Regional Water Quality Control Board
Los Angeles Region
101 Center Plaza Drive
Monterey Park, CA 91754-2156

RE: **REMEDIATION STRATEGY AND STATUS REPORT**
BOEING REALTY COMPANY C-6 FACILITY, PARCEL A

Dear Mr. Ross:

On behalf of the Boeing Realty Company, I am pleased to provide the subject report for your review. The report was prepared by Integrated Environmental Services, Inc. for the ongoing remedial effort at the C-6 Facility in Torrance.

As you have witnessed in your frequent visits, site characterization and clean-up of Parcel A of the C-6 Facility is following an expedited schedule. In an effort to maintain the excellent level of communication between the agencies and the remediation team exhibit during this project, the following document has been prepared to present the complete facility remediation strategy and projected schedule for ongoing remediation events.

I appreciate the opportunity to work closely with you and your staff on this important project. Should you have any questions concerning this document of the project please feel free to contact me at your earliest convenience.

Very truly yours,

Michael Y. Young, Ph.D.
President
Integrated Environmental Services, Inc.

cc: Karen Baker, DTSC - Long Beach
Mario Stavale, Boeing Realty Company - Long Beach
Dan Summers, The Boeing Company - St. Louis
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Remediation Strategy and Status

Boeing Realty Company
C-6 Facility, Parcel A

August 1997

REMEDIATION STRATEGY AND STATUS
BOEING COMPANY C-6 FACILITY

1. INTRODUCTION

This brief provides a summary of the environmental related actions performed to date at The Boeing Company (Boeing) C-6 facility and outlines the environmental strategy which will be undertaken for the remainder of the site redevelopment.

2. SITE DESCRIPTION AND HISTORY

The Boeing C-6 complex is located at 19503 South Normandie Avenue in Los Angeles, California, just south of the San Diego Freeway (I-405) and approximately one mile west of the Harbor (I-110) - San Diego Freeway interchange (Exhibit 1).

Aerial photographs indicate that the area was farmland prior to the 1940s. Industrial use of the property began in 1941 when the Defense Plant Corporation developed the site as part of an aluminum reduction plant. The Aluminum Company of America (ALCOA) operated the plant for the government to produce aluminum during World War II. Five "pot lines" were originally constructed at the plant, but only three were placed in operation. ALCOA operated the plant until it was closed in September 1944. The War Assets Administration then used the site for temporary storage during the following two years. In 1948, Columbia Steel Company purchased the property. No significant changes were made to the plant under Columbia Steel Company ownership.

In March 1952, the US Navy purchased the property and established the Douglas Aircraft Company (DAC) as the contractor and operator of the facility for the manufacture of aircraft and aircraft parts. DAC purchased the property from the Navy in 1970 and used the facility to manufacture components for various commercial and military aircraft until approximately 1992. DAC has used the C-6 facility for the storage and distribution of aircraft parts since cessation of manufacturing activities.

Boeing began a phased redevelopment of the 170-acre property in 1996[1] (phased both in terms of actual environmental activities and demolition). As shown in Exhibit 2, the property has been divided into three parcels (A, B, and C). Each parcel will undergo, as required, environmental investigation, assessment, and remediation prior to construction. Redevelopment of the northernmost portion of the property, Parcel A, began in 1996 and is ongoing.

[1] McDonnell Douglas Realty Company (MDRC), began the redevelopment. MDRC became a wholly owned subsidiary of The Boeing Company on August 1, 1997, and is now known as Boeing Realty Company.

3. ENVIRONMENTAL STRATEGY

The C-6 property has undergone remedial investigations, site assessments, and feasibility studies by various consultants since 1986. To date, more than 55 reports have been generated on site conditions. However, in 1996 it became apparent that there was a need to systematically characterize and address the site. Integrated Environmental Services, Inc. (IESI) was retained to cooridinate this effort, with oversight by the California Environmental Protection Agency (Cal/EPA), the latter including the Department of Toxic Substance Control (DTSC) and the Regional Water Quality Control Board (RWQCB), Los Angeles Region.

To expedite the redevelopment of Parcel A, surface soils and groundwater are undergoing separate remediation programs. Surface soils, defined as all soils to a depth of 12 feet below ground surface (bgs), are a concern due to their potential impact on future site uses. Groundwater, defined as the underlying saturated zones as well as all potential subsurface soil sources (below 12 feet bgs), is a concern because of a potential impact to the underlying aquifers.

The following describes the programmatic approach and accomplishments to date for surface soils and groundwater based on parameters reviewed and approved by the RWQCB and DTSC. The progress of surface soil cleanup is presented in Section 3.1. The progress of groundwater cleanup is presented in Section 3.2.

3.1 SURFACE SOILS

Boeing has adopted an "80/20" health-based remediation strategy for soils, to ensure health protectiveness throughout the expedited closure. Under this strategy, Boeing has developed and employed a set of health-based screening criteria (HBSC) for use in the identification and remediation of potentially contaminated soils during demolition activities (Exhibit 3). The remediation criteria could not be submitted for review prior to demolition because of the aggressive remediation and development schedule for the site. Boeing has acknowledged that the use of these preliminary remediation criteria may require it to conduct additional remediation upon a complete agency review. The soils identified using the unapproved values are believed to represent roughly 80 percent of the required remediation effort.

The development of these remediation criteria followed standard guidance for development of risk-based remediation goals as promulgated by the U.S. Environmental Protection Agency (EPA) and Cal/EPA . In addition, Boeing has reviewed the recently approved baseline risk assessment and remediation goals documents for the adjacent Lockheed Martin ILM facility, and has incorporated agency approved assumptions and parameters where appropriate.

As Parcel A demolition nears completion, the remediation criteria will be submitted for agency review and approval. The resulting health-based remediation goals will be used to re-evaluate the Parcel A soils and identify areas requiring further remediation. This additional remediation, if necessary, represents the remaining 20 percent.

Following the completion of all surface soil remediation, a human health risk assessment will be conducted to confirm the health protectiveness of surface soils within Parcel A.

The 80/20 approach will be implemented in four primary tasks:

1. Characterization of Soils

2. Development of Health-Based Screening Criteria

3. Focused Remediation of Surface Soils

4. Risk Assessment Confirmation

3.1.1 Characterization of Soils

To completely characterize and remediate chemical contamination in subsurface soils, Boeing has worked with the RWQCB and DTSC to design and implement three sampling programs: 1) Phase II Soil Characterization, 2) Demolition/Excavation, and 3) Stockpile/ Confirmation. Prior to implementation, each set of sampling protocols was submitted to and approved by both RWQCB and DTSC.

3.1.1.1 Phase II Soil Characterization

Kennedy/Jenks Consultants performed the Phase II Soil Characterization of the C-6 facility between February 27 and May 7, 1997. The Phase II sampling was based on a Phase I Assessment of areas where chemicals could have been released to soil. Prior to the study, a field sampling plan (FSP) was prepared for the soil characterization and reviewed and approved by RWQCB and DTSC.

The Phase II Soil Characterization study was designed to 1) characterize the nature and extent of soil contamination above groundwater, based on potential areas of concern identified in earlier studies and 2) collect site-specific data to support the forthcoming risk assessment. The soil characterization included the physical properties of the soils, the subsurface distribution of soil types, and the nature and extent of contamination within the soils. Site-wide, more than 200 soil borings and more than 900 soil samples were drilled and collected, respectively, during the Phase II Soil Characterization study. Approximately 550 soil samples were collected for analysis from 110 soil borings of various depths within Parcel A. On July 9, 1997, Kennedy/Jenks Consultants submitted the findings of the Parcel A Phase II Soil Characterization Study to RWQCB and DTSC for review.

Four locations in Parcel A were found to contain contaminants at concentrations greater than those allowed under the soil screening evaluation process (Exhibit 4) and therefore were designated areas of concern. These locations are: 1) Building 36, 2) Building 66-1 wash-down area , 3) Borings 1-27 and 1-27A (located north of Building Area 45), and 4) Borings SA-NE-14 and SA-NE-17 (located north of Building 45 and east of Building 41). These areas of concern will be completely delineated and appropriately remediated during the above-mentioned 20 percent remediation phase.

3.1.1.2 Demolition/Excavation

To identify and remediate subsurface soil contamination, two field sampling approaches were used during demolition/excavation activities at Parcel A: grid sampling and hot-spot sampling.

The grid sampling approach involved the systematic collection of samples at regular, predetermined intervals of a grid placed over the study area. For Parcel A, a grid size of 20 feet by 20 feet was employed. An organic vapor analyzer (OVA) or photo-ionization detector (PID) was used to measure head-space organic vapor concentrations in freshly exposed soil at each grid node. Soil samples were collected for complete laboratory analysis from locations with OVA/PID readings of greater than 5 ppm.

The hot-spot sampling approach was designed to supplement the grid sampling program. It is an integral part of the overall site characterization effort. Under the hot-spot sampling approach, the environmental field crew supervising the demolition/excavation operations is required to collect a soil sample from any location that exhibits one of the following:

1. An OVA or PID head-space volatile organic compound (VOC) reading exceeding 5 ppm

2. Visible staining of the soil

3. Noticeable odors

To date, more than 40,000 cubic yards of soil have been excavated in response to demolition/excavation sampling results. Demolition/excavation sampling is ongoing at Buildings 36 and 41, Area 1, and Supplemental Area Northeast. At the time of this brief, these areas had not completed soil excavation. Ongoing excavation is focused on the former diesel tanks (currently part of the fire suppression system) and the distribution pipelines that run from the former diesel tanks to Buildings 41 and 37.

3.1.1.3 Stockpile/Confirmation

The origin and disposition of excavated soils are comprehensively and systematically logged by the field crew. Additional soil samples are collected from stockpiles (stockpile samples) at a frequency of approximately 1 sample per 250 cubic yards of excavated soil[2]. Stockpile samples are collected using a shovel to cut vertically into the side of a stockpile at each sample location to expose fresh soil. Samples are then collected from the exposed wall and sent to state-certified laboratory for complete chemical analysis. Complete sample analysis program includes total recoverable petroleum hydrocarbon (TRPH) by EPA Methods 8010/8020 and 418.1, volatile organic compounds (VOCs) by EPA Method 8260, semi-volatile organic compounds (SVOCs) by EPA Method 8270, metals by EPA Methods 6010, 7196, and 7471, polychlorinated biphenyls (PCBs) and pesticides by EPA Method 8080. The purpose of this effort is to determine the chemical quality of the stockpiled soil generated from the remedial excavations and to determine its appropriate final disposition (i.e., off-site disposal or use as construction backfill).

The backfill soil criteria have been developed to satisfy two primary objectives: 1) residual concentrations in backfill materials must be below levels projected to impact underlying drinking water sources, and 2) residual concentrations in backfill materials must be below the HBSC to be protective of human health concern future construction and commercial/industrial activities.

Table 1 summarizes the permissible concentrations for groundwater protection as approved by RWQCB.

Table 1
Ceiling Concentrations for Groundwater Protection

Analytes	**Ceiling Concentrations**
TRPH	
C-4 through C-12	2,000 mg/kg
C-13 through C-22	10,000 mg/kg
C-22+	50,000 mg/kg
Metals	TTLC and 10 times STLC

Note:
A waste extraction test is performed on samples with concentrations greater than 10 times STLC but less than TTLC, per CCR Title 22.

[2] After reviewing site remedial activities and laboratory reports, RWQCB on July 22, 1997, modified the procedures to 1 soil sample per 1000 cubic yards when the PID/OVA head-space reading is between 5 and 50 ppm and 1 soil sample per 250 cubic yards if the head-space reading is greater than 50 ppm.

IESI also developed conservative HBSC (Exhibit 3) using methodologies and protocols developed by Cal/EPA and US EPA. The HBSC also used risk assessment assumptions approved by DTSC for the International Light Metal (ILM) site, which is adjacent to the C-6 facility.

All soils excavated at the site undergo the soil screening evaluation process depicted in Exhibit 4. Soils that fail any portion of this test are either disposed off site or undergo treatment until they meet the screening criteria. No soils can be used as backfill until they have passed all aspects of the test and RWQCB approval has been obtained. Soils will be backfilled to a minimum of 90 percent compaction to meet building code requirements.

Designed as an additional safeguard, confirmation soil samples have been collected throughout Parcel A to ensure that soil excavation is complete. In March 1997, the sampling plan for the post-remediation soil confirmation study was sent to RWQCB and DTSC for review. A two-tiered sampling program has been implemented to address this issue:

1. Tier I - Point Source Confirmation
2. Tier II - Parcel-Wide Assurance

Tier I confirmation sampling is conducted to ensure that affected soil has been removed from each excavation and/or each potential area of concern identified in previous investigations. Confirmation sampling is conducted at a frequency of at least 1 sample location each 20 feet along the walls and floor of each excavation. Soil removal continues at a particular location until the following conditions are met: 1) the head-space VOC reading in freshly exposed soil is less than or equal to 5 ppm, 2) no visible soil staining, and 3) odors are not noticeable. A confirmation sample is collected only when these conditions are met. Iterations of additional soil excavation are conducted as required until the confirmation sample analytical data indicate that *in situ* soil quality passes the same evaluation process used for stockpiled soils. A detailed discussion of this process and analytical results can be found in the Post-Remedial Excavation Confirmation Sample Report, Parcel A (No. 1 and 2).

To gain a higher level of confidence that subsurface soil conditions have met the prescribed site-specific cleanup criteria set for the remediation, a parcel-wide assurance sampling program will be implemented once the excavations in Parcel A are backfilled and compacted. The parcel will be divided into grid segments of approximately 1 acre each. One sample location will be placed at each area of concern previously identified and in the center of each grid segment, and samples will be collected from various depths to 4.0 feet. Soil samples will be analyzed for the entire suite of chemicals of potential concern (including TRPH, VOCs, SVOCs, metals, PCBs and pesticides).

Stockpile/Tier I confirmation sampling is ongoing in support of remedial activities on Parcel A. Approximately 40,000 cubic yards of soil have been excavated. As stated, areas in Building 36 and 41, Area 1, and Supplemental Area Northeast have not completed soil excavation. To date, more than 300 cubic yards of excavated material have failed the interim screening site-specific cleanup goals and have been taken off site for disposal. Preliminary laboratory reports indicate approximately 2,500 cubic yards of soils excavated from the pipeline areas may fail the screening criteria. Final disposition of these soils will be made in consultation with the regulatory agencies once the final laboratory reports are received.

Tier II sampling will be initiated on a parcel-by-parcel basis following the completion of soil excavation, backfilling, and compaction activities on each parcel.

3.1.2 Development of Health-Based Screening Criteria

To facilitate the expedited development schedule, IESI has developed conservative HBSC to support the ongoing cleanup effort (Exhibit 3). Boeing has acknowledged that these values have not been reviewed or approved by DTSC and RWQCB and that the use of such values may require Boeing to conduct additional remediation (the so-called "20 percent).

Based on a review conducted by IESI (dated April 30, 1997) and the memorandum prepared by DTSC on the subject matter (dated June 23, 1997), DTSC reaffirmed that assumptions and parameters used by ILM in developing its baseline risk assessment and health-based goals (HBGs) are acceptable to DTSC. Using these agency-approved assumptions and parameters coupled with site-specific data, it would appear that the HBSC used by Boeing are extremely conservative. It is anticipated that the final remediation goals should be less stringent than the HBSC being used at Parcel A. Table 2 compares the agency approved ILM remediation goals with the HBSC.

Boeing is currently preparing the complete documentation for the final remediation goals and will submit these values to DTSC for approval in early August 1997.

3.1.3 Focused Remediation of Surface Soils

Parcel A soil remediation is ongoing. Soils that do not pass the evaluation process during the demolition/excavation or Tier 1 confirmation sampling (Exhibit 4) are excavated and further characterized in accordance with the stockpile sampling protocols. Soils that fail any portion of this test are currently disposed of off site. No soil can be used as backfill until it has passed all aspects of the test and RWQCB approval has been obtained. Soils will be backfilled to a minimum of 90 percent compaction to meet building code requirements.

Table 2
Comparison of Remediation Goals[1]

Compound	Cleanup Levels (mg/kg) ILM HBGs	Boeing Parcel A HBSC
Benzene	63	25
Tetrachloroethene	130	82
1,1-Dichloroethene	11	.068
Trichloroethene	420	341
Aroclor 1254	1.3	0.87
Aroclor 1260	1.3	0.87
Arsenic	14	8.87
Beryllium[2]	1	182
Chromium III	29000	32200
Lead [3]	111	111
Vinyl Chloride	0.64	0.0081
Antimony	6	9.05
Cadmium[2]	16	16.4
Nickel	2500	370

Notes:
1) Table includes only those compounds for which ILM developed remediation goals. The complete Boeing list is included in Attachment 1.
2) Difference is a result of no current oral toxicity factor - Jim Collins at Air Toxicology and Epidemiology Section (ATES), Office of Environmental Health Hazard Assessment (OEHHA), April 30, 1997.
3) ILM lead value adopted based on background study conducted at the ILM facility (ILM 1994).

Contaminated surface soils identified during the demolition/excavation, confirmation or Phase II soil characterization of Parcel A have been excavated in all areas except Buildings 41 and 36, Area 1, and Supplemental Area Northeast. Several of these areas are currently undergoing excavation, while the remainder are scheduled for remediation in late July and August. Separate reports addressing the clean up of these soils will be prepared and submitted for agency review and approval once the task is completed.

3.1.4 Risk Assessment Confirmation

IESI will prepare a post-remediation human health risk assessment to address potential health impacts associated with residual contamination on Parcel A. This site-specific risk assessment will follow state and federal guidelines and incorporate the DTSC-approved approach taken for the adjacent ILM facility. Site-specific values will be used when available; however, DTSC approved-ILM values followed by state and federal default values will be used when site-specific values are not available. The risk assessment will be forwarded to the RWQCB and DTSC for review and approval. The report is anticipated to be completed approximately one month after the Parcel A is backfilled, compacted, and the post-remediation confirmation sampling is completed.

3.2 GROUNDWATER

No remedial action has been initiated on groundwater within Parcel A at this time. On July 17, 1997 Boeing issued a Request for Proposal (RFP) soliciting services to delineate groundwater contamination within and immediately surrounding Parcel A and to design and implement the appropriate groundwater remediation program. Selection of a qualified firm is scheduled to be completed by August 20, 1997. The selected contractor will prepare a work plan, protocol, and remediation approach. These documents will be forwarded to RWQCB and DTSC for review and approval prior to starting characterization and remedial activities. The following summarizes the known hydrological conditions at the site.

3.2.1 Groundwater Characterization

Near-surface sediments underlying the site are assigned to the Lakewood Formation, a unit defined to include essentially all of the upper Pleistocene sediments in the Los Angeles Coastal Plain area. The Lakewood Formation includes deposits of both marine and continental origin, representing stream transport and sedimentation along the Pleistocene marine plain. The drilling program conducted during the Phase II Soil Characterization provided extensive information with regard to the sediments within the upper 50 feet of the site and Parcel A. The Lakewood Formation is underlain by the lower Pleistocene San Pedro Formation, which continues to about 1,000 feet in depth in the are of the site.

The Lakewood Formation may include the Semiperched Aquifer, the Bellflower Aquifer, and the Gage Aquifer in the area of the site. Major water-bearing zones within the San Pedro Formation are the Lynwood and Silverado aquifers. The Silverado, at a depth of nearly 500 feet, is an important groundwater source in the Coastal Plain and is considered a source of drinking water.

Groundwater conditions at the site are known from previous investigations and from the quarterly groundwater monitoring program (Kennedy/Jenks Consultants, 1997). Groundwater from 15 observation wells at the site has been sampled and analyzed on a quarterly basis since 1992. The uppermost groundwater at the site appears to be under water-table conditions at depths of 60 to 70 feet. Regionally, this uppermost groundwater is probably considered part of the Semiperched Aquifer and is separated from the deeper zones by the Bellflower Aquiclude. Most of the monitoring wells are completed at or near the water table, at depths of 55 to 90 feet. Two wells are completed in a deeper zone at about 115 to 140 feet.

The latest groundwater monitoring report, first quarter 1997, measured the shallow zone groundwater elevations from 13.78 feet below mean sea level (MSL) to 15.19 feet below MSL. This reflects a rise in groundwater elevations of about 0.38 feet since the previous quarter monitoring. The groundwater gradient in the shallow zone is generally east to east-southeast with a southerly directed trough-like depression between observation wells WCC-12S and WCC-7S.

3.2.2 Groundwater Contamination

Two distinct groundwater contamination plumes have been identified within Parcel A. One plume is located at the western, upgradient property boundary and consists primarily of tetrachloroethene (TCE), chromium, and aluminum. The other plume is located in the area of Buildings 36 and 41 and contains TCE, 1,1-dichloroethene (1,1-DCE), and TRPH. The results of the chemical analysis of groundwater samples collected during the first quarter of 1997 are as follows:

- Well DAC-P1, located at the western, upgradient property boundary, indicates a TCE concentration of 15,000 micrograms per liter (µg/L) coming onto the Boeing property. The concentration of TCE detected is consistent with historical ranges in this shallow zone well.

- Background concentrations of TCE and 1,1-DCE decreased in the shallow zone cross-gradient well WCC-2S and increased in the upgradient well WCC-11S. Both contaminants are within historical ranges.

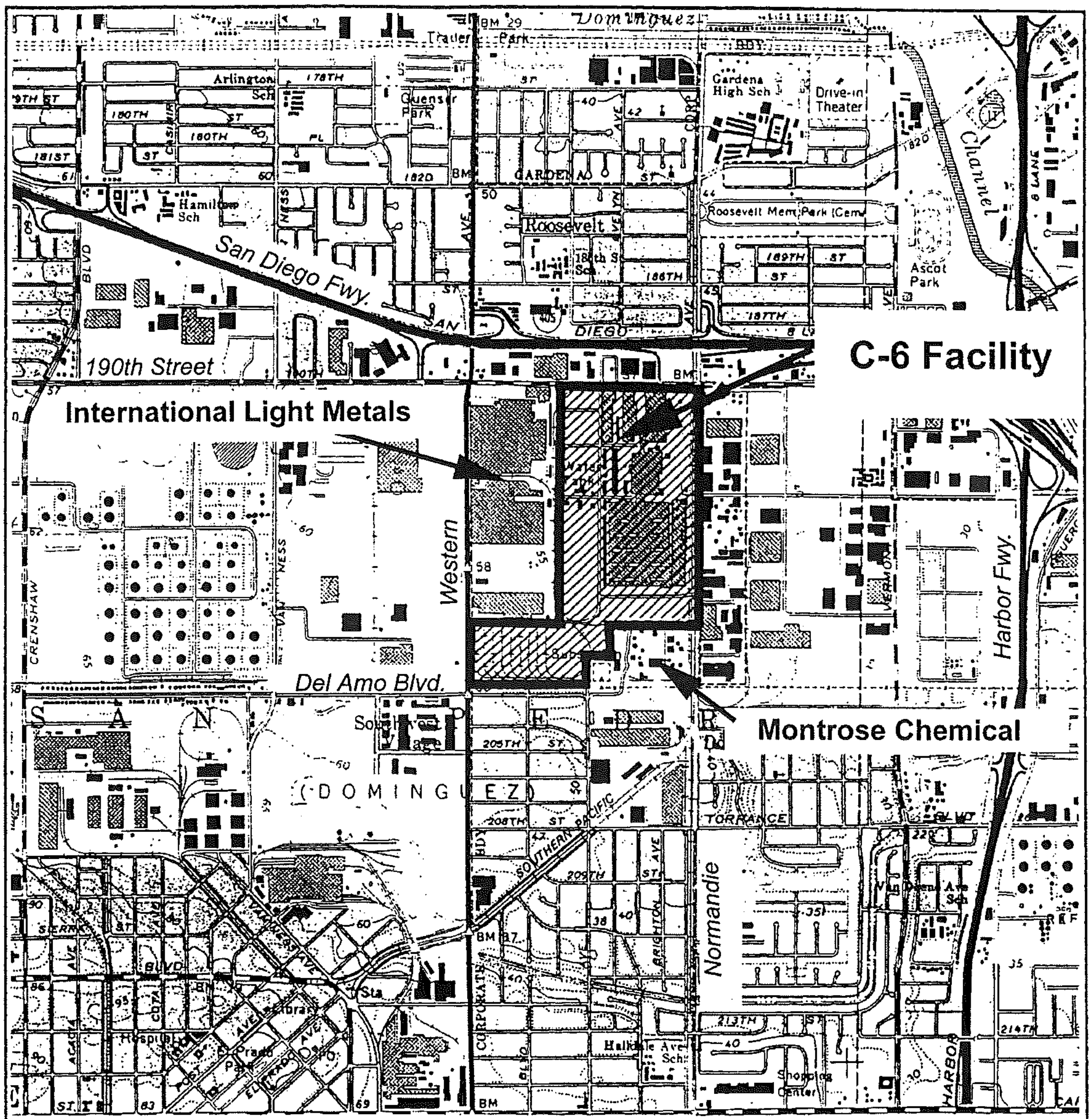
- Groundwater elevation and chemical concentration data indicate that chemical transport in the shallow zone is generally in the southerly and southeasterly direction in the vicinity of Buildings 36 and 41.

The drilling for the Phase II Soil Characterization was entirely in the unsaturated zone and did not provide additional information on the groundwater. Characterization of potential groundwater plumes will be conducted prior to the initiation of remedial activities. All characterization and sampling plans will be formally submitted for approval to the RWQCB and DTSC.

4. SCHEDULE

Exhibit 5 presents the Parcel A schedule and major milestones.

Exhibit 1
Site Location Map



Base Map: U.S.G.S. 7.5 Minute Topographic Map,
Torrance, California Quadrangle, 1981.

0 2000 4000

Approximate Scale in Feet

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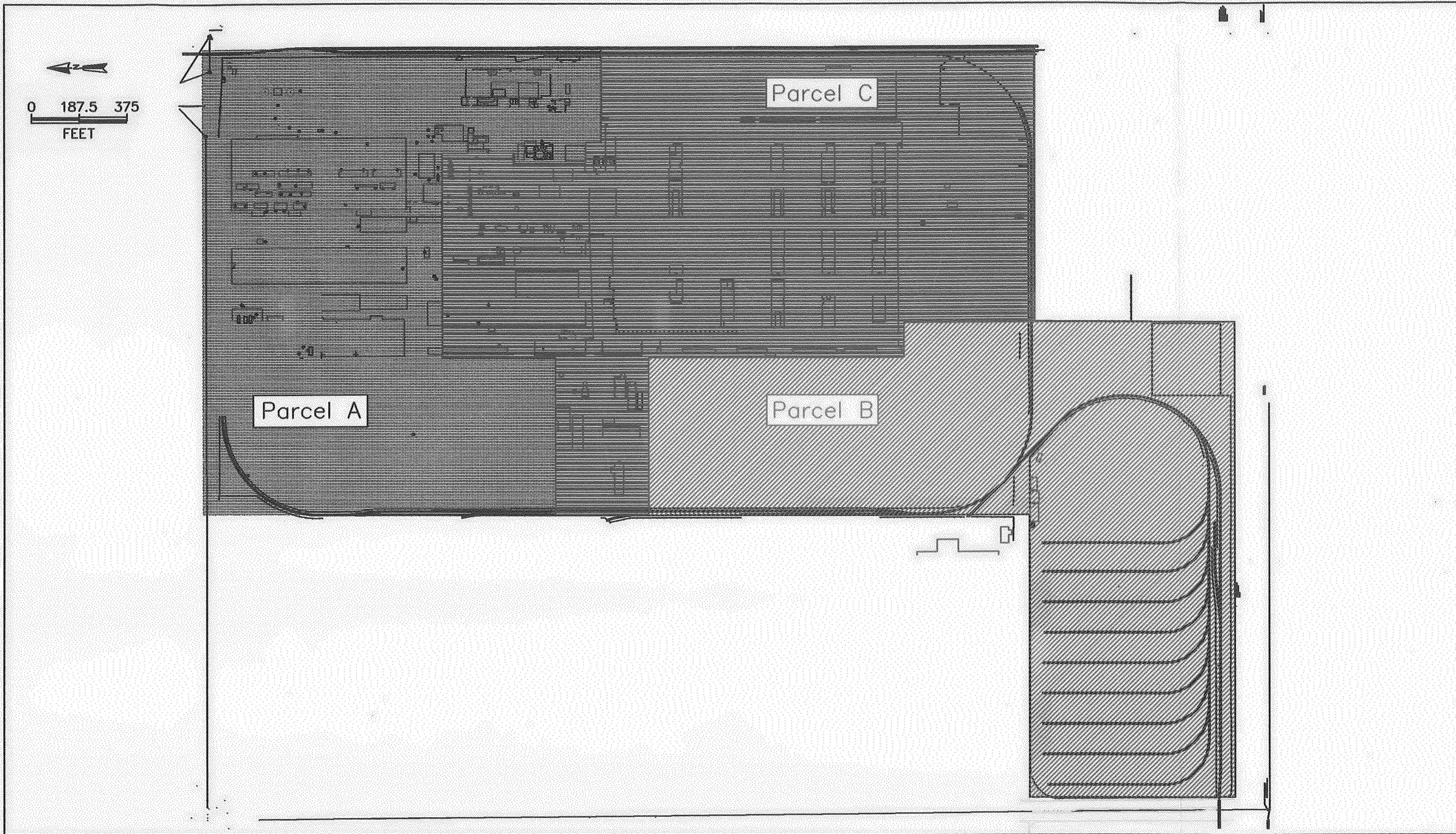
Boeing Company C-6 Facility and Vicinity

F:Projects/MDC6/C6 Enviro Strategies/Figs/Figure 2



INTEGRATED Environmental Services, Inc.	TITLE: Boeing Company C6 Facility Site with Parcels Defined Parcels "A", "B", and "C"	DWN: JL	DES.:	PROJECT NO.: 2363
		CHKD: CS	APPD:	
		DATE: 8-14-97	REV.: 2	FIGURE NO.: 2

Exhibit 3
Health-Based Screening Criteria (HBSC)

Constituent	Construction Worker Initial HBSC (mg/kg)	Commercial/ Industrial User Initial HBSC (mg/kg)	Final HBSC (mg/kg)
1-butanol	1.98E+04	3.46E+04	1.98E+04
1,1-dichloroethane	2.23E+03	1.10E+03	1.10E+03
1,1-dichloroethene	1.57E+01	4.21E+00	4.21E+00
1,1,1,2-tetrachloroethane	4.98E+02	1.44E+04	4.98E+02
1,1,2-trichloroethane	2.23E+02	1.26E+03	2.23E+02
1,1,2,2-tetrachloroethane	6.25E+01	1.50E+03	6.25E+01
1,2-dibromo-3-chloropropane	2.42E+00	7.47E+01	2.42E+00
1,2-dibromoethane	4.86E+00	1.84E+02	4.86E+00
1,2-dichlorobenzene	NA	2.64E+06	2.64E+06
1,2-dichloroethane	2.06E+02	2.66E+02	2.06E+02
1,2-dichloropropane	3.37E+01	7.25E+00	7.25E+00
1,2-diphenylhydrazine	2.03E+01	2.36E+08	2.03E+01
1,2,3-trichloropropane	2.39E+00	4.08E+01	2.39E+00
1,2,4-trichlorobenzene	1.74E+02	4.74E+07	1.74E+02
1,3-dichloropropene	4.83E+01	6.63E+02	4.83E+01
1,4-dichlorobenzene	4.32E+02	4.37E+04	4.32E+02
2-butanone	3.28E+04	2.35E+06	3.28E+04
2-chlorophenol	8.57E+02	1.17E+06	8.57E+02
2-methylphenol	8.66E+03	7.59E+07	8.66E+03
2-naphthylamine	9.81E+00	1.63E+06	9.81E+00
2,4-dichlorophenol	5.21E+01	2.22E+07	5.21E+01
2,4-dimethylphenol	3.48E+03	4.37E+08	3.48E+03
2,4-dinitrophenol	3.49E+01	7.14E+09	3.49E+01
2,4-dinitrotoluene	3.48E+01	7.62E+06	3.48E+01
2,4,5-trichlorophenol	1.73E+04	2.21E+08	1.73E+04
2,4,6-trichlorophenol	2.52E+02	1.10E+07	2.52E+02
2,6-dinitrotoluene	2.59E+01	4.51E+05	2.59E+01
3,3-dichlorobenzidine	1.47E+01	7.53E+08	1.47E+01
4-chloroaniline	6.93E+01	6.50E+06	6.93E+01
4-methyl-2-pentanone	1.20E+04	6.84E+05	1.20E+04
4-methylphenol	8.69E+01	4.01E+07	8.69E+01
4,4-ddd	1.03E+02	9.97E+08	1.03E+02
4,4-dde	7.28E+01	2.83E+06	7.28E+01
4,4-ddt	1.22E+01	2.26E+08	1.22E+01
acenaphthene	8.10E+03	1.62E+08	8.10E+03
acetone	1.55E+04	4.37E+05	1.55E+04

Constituent	Construction Worker Initial HBSC (mg/kg)	Commercial/ Industrial User Initial HBSC (mg/kg)	Final HBSC (mg/kg)
acrolein	NA	8.05E+01	8.05E+01
acrylonitrile	1.59E+01	7.65E+01	1.59E+01
aldrin	7.32E-01	2.82E+04	7.32E-01
alpha-bhc	3.93E+00	2.32E+05	3.93E+00
aniline	3.10E+03	1.02E+07	3.10E+03
anthracene	4.06E+03	1.37E+10	4.06E+03
aroclor 1016	NA	7.35E+05	7.35E+05
aroclor 1254	8.70E-01	5.69E+05	8.70E-01
benzene	1.43E+02	1.71E+02	1.43E+02
benzidine	3.52E-02	1.55E+02	3.52E-02
benzoic acid	6.96E+04	6.58E+10	6.96E+04
benzo(a)anthracene	1.14E+01	1.13E+09	1.14E+01
benzo(a)pyrene	1.14E+00	9.56E+07	1.14E+00
benzo(b)fluoranthene	1.14E+01	3.19E+08	1.14E+01
benzo(k)fluoranthene	1.14E+01	9.56E+07	1.14E+01
benzyl alcohol	1.73E+04	3.81E+08	1.73E+04
benzyl chloride	1.00E+02	4.03E+03	1.00E+02
beta-bhc	1.38E+01	9.94E+06	1.38E+01
beta-chloronaphthalene	NA	2.32E+07	2.32E+07
bis(2-chloro-1-methylethyl)ether	2.49E+02	2.93E+04	2.49E+02
bis(2-chloroethyl)ether	6.91E+00	6.91E+02	6.91E+00
bis(2-ethylhexyl)phthalate	2.10E+03	3.59E+09	2.10E+03
bromodichloromethane	1.30E+02	2.94E+03	1.30E+02
bromoform	3.34E+02	1.28E+05	3.34E+02
bromomethane	NA	1.15E+02	1.15E+02
carbazole	8.83E+02	6.66E+08	8.83E+02
carbon disulfide	1.43E+03	7.04E+04	1.43E+03
carbon tetrachloride	9.71E+01	1.35E+02	9.71E+01
chlordane	1.04E+00	1.55E+05	1.04E+00
chlorobenzene	NA	2.83E+04	2.83E+04
chloroform	1.49E+02	9.58E+02	1.49E+02
chloromethane	7.43E+02	7.40E+01	7.40E+01
chrysene	1.14E+02	5.06E+10	1.14E+02
cis-1,2-dichloroethene	1.34E+03	7.51E+03	1.34E+03
cumene	3.79E+03	5.73E+04	3.79E+03
dibenzo(a,h)anthracene	3.35E+00	6.34E+11	3.35E+00
dibromochloromethane	1.50E+02	1.54E+02	1.50E+02
dichlorodifluoromethane	2.14E+03	7.01E+02	7.01E+02

Constituent	Construction Worker Initial HBSC (mg/kg)	Commercial/ Industrial User Initial HBSC (mg/kg)	Final HBSC (mg/kg)
dieldrin	1.22E+00	2.33E+04	1.22E+00
diethyl phthalate	1.39E+05	6.03E+09	1.39E+05
di-n-butylphthalate	1.74E+04	4.19E+08	1.74E+04
di-n-octylphthalate	3.49E+02	1.80E+10	3.49E+02
endosulfan	1.46E+02	2.14E+08	1.46E+02
endrin	7.33E+00	1.37E+08	7.33E+00
ethyl chloride	1.42E+05	1.57E+06	1.42E+05
ethylbenzene	NA	7.33E+05	7.33E+05
fluoranthene	6.97E+03	3.03E+10	6.97E+03
fluorene	6.94E+03	1.40E+08	6.94E+03
gamma-bhc	2.32E+01	2.63E+05	2.32E+01
heptachlor	2.87E+00	1.78E+03	2.87E+00
heptachlor epoxide	3.14E-01	1.35E+03	3.14E-01
hexachlorobenzene	9.69E+00	2.80E+03	9.69E+00
hexachlorobutadiene	2.24E+02	7.13E+04	2.24E+02
hexachlorocyclopentadiene	8.87E+01	9.79E+02	8.87E+01
hexachloroethane	1.73E+02	2.39E+05	1.73E+02
indeno(1,2,3-cd)pyrene	1.47E+01	1.23E+11	1.47E+01
isobutyl alcohol	4.81E+04	2.55E+06	4.81E+04
isophorone	1.85E+04	2.92E+07	1.85E+04
methoxychlor	8.71E+01	1.48E+09	8.71E+01
methyl methacrylate	1.06E+03	5.56E+04	1.06E+03
methylene bromide	1.51E+03	2.75E+04	1.51E+03
methylene chloride	1.07E+03	1.26E+03	1.07E+03
methyl-tert-butyl ether	NA	1.39E+06	1.39E+06
n-butylbenzyl phthalate	3.48E+03	6.52E+09	3.48E+03
nitroaniline, o-	8.07E+03	2.45E+06	8.07E+03
nitrobenzene	8.61E+01	1.78E+05	8.61E+01
nitrosodiphenylamine, p-	8.02E+02	1.03E+07	8.02E+02
n-nitrosodimethylamine	2.60E-01	1.38E-02	1.38E-02
n-nitroso-di-n-propylamine	2.48E+00	4.46E+02	2.48E+00
n-nitrosodiphenylamine	1.96E+03	4.80E+09	1.96E+03
o-chlorotoluene	3.14E+03	1.05E+05	3.14E+03
p-chloro-m-cresol	3.48E+04	NA	3.48E+04
pentachlorophenol	3.04E+02	3.09E+07	3.04E+02
phenol	1.04E+04	3.14E+09	1.04E+04
pyrene	2.35E+03	4.11E+10	2.35E+03
styrene	3.02E+05	7.58E+06	3.02E+05

Constituent	Construction Worker Initial HBSC (mg/kg)	Commercial/ Industrial User Initial HBSC (mg/kg)	Final HBSC (mg/kg)
tetrachloroethene	3.36E+02	7.52E+03	3.36E+02
toluene	3.12E+04	2.41E+05	3.12E+04
toxaphene	1.47E+01	9.16E+04	1.47E+01
trans-1,2-dichloroethene	2.68E+03	1.47E+04	2.68E+03
trichloroethene	1.05E+03	1.39E+03	1.05E+03
trichlorofluoromethane	1.03E+04	4.89E+04	1.03E+04
vinyl acetate	5.41E+03	2.31E+05	5.41E+03
vinyl chloride	5.16E+00	1.81E-01	1.81E-01
xylenes	3.26E+04	2.61E+07	3.26E+04

Exhibit 4
Screening Process Flow Diagram

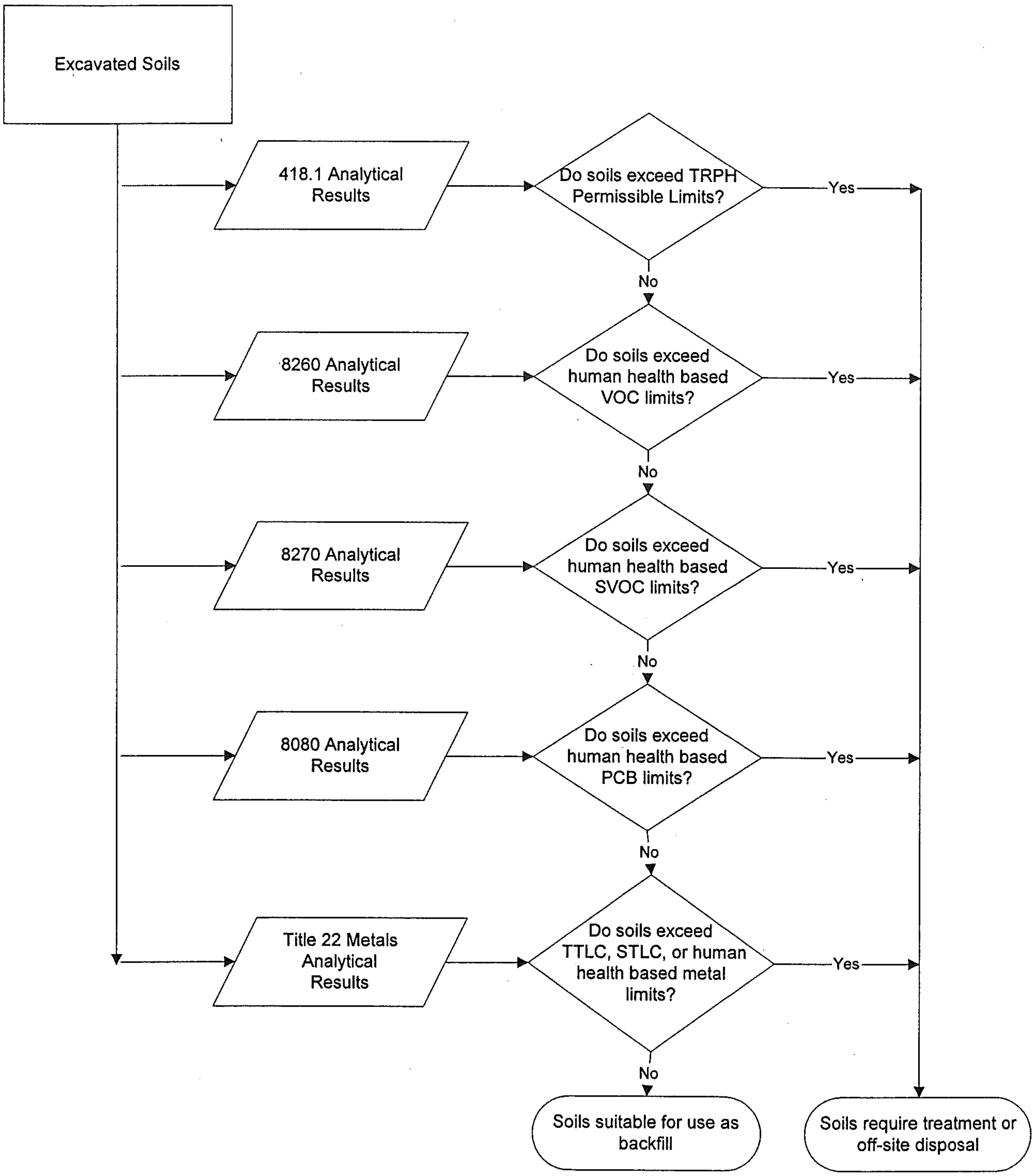


Exhibit 5
Projected Milestones of C-6 Facility Parcel A Remediation

Milestone	Goal
1. Submit Site Soil Characterization to DTSC and RWQCB	7/9/97
2. Submit Health-Based Remediation Goals (HBRGs) to DTSC and RWCB	8/20/97
3. Selection of Groundwater Contractor	8/20/97
4. Approval of HBRGs	8/25/97
5. Installation of Groundwater Remediation System	12/31/97
6. Startup Test of Groundwater Remediation System	1/1/98
7. Operation of Groundwater Remediation System	2/1/98